

In the Claims

1. (Currently Amended) A transmitting apparatus for transmitting a content program, comprising:

a record medium on which at least one content program ~~has been written~~ is stored;

~~section generating means for generating~~ a section generator that divides the content program into sections, section 1 to section n (where n is an integer) in such a manner that when the content program is divided into the section 1 to the section n in a predetermined ratio, the length of a section ~~on the beginning side is smaller than the length of a section on the end side~~ section n is longer than the length of section 1;

~~signal formatting means for formatting~~ a signal formatter that formats a signal in such a manner that the length of data of each of the section 1 to the section n in the content program is the same in each of channel 1 to channel n;

~~multiplexing means for multiplexing~~ a multiplexer to multiplex the signal formatted by the signal formatter; and

~~transmitting means for transmitting~~ a transmitter to transmit the multiplexed signal.

2. (Original) The transmitting apparatus as set forth in claim 1, wherein the data of each of the section 1 to the section n has been written to said record medium corresponding to pre-designated addresses.

3. (Currently Amended) The transmitting apparatus as set forth in claim 1, wherein said section ~~generating means~~ generator divides the content program by n so that a ratio of the lengths of the section 1 to the section n ~~become is~~ is $1, 2, 4, \dots, 2^{(n-1)}$, respectively.

4. (Currently Amended) The transmitting apparatus as set forth in claim 1, wherein said section ~~generating means~~ generator divides the content program so that a ratio of the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) ~~become is~~ is $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that wherein the length of each of the section m to the section n is the same as the length of the section m.

5. (Currently Amended) The transmitting apparatus as set forth in claim 1, wherein said signal ~~formatting means~~ formatter repeats data of the section 1 to the section n-1 so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

6. (Currently Amended) The transmitting apparatus as set forth in claim 1, wherein said signal ~~formatting means~~ formatter repeats data of each of the section 1 to the section m-1 so that the length of each of signals of the channel 1 to the channel m-1 (where $1 < m < n$; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m.

7. (Currently Amended) The transmitting apparatus as set forth in claim 1, wherein said ~~multiplexing means~~ multiplexer multiplexes synchronous data, flag data, and the data of the section 1 to the section n, the synchronous data being used to establish a synchronization with a receiver, the flag data representing that beginning data is contained in each of the section 1 to the section n.

8. (Original) The transmitting apparatus as set forth in claim 1, wherein the multiplexed signal is modulated.

9. (Currently Amended) A transmitting method for transmitting a content program, the method comprising ~~the steps of~~:
writing at least one content program to a record medium;
~~generating~~ dividing the content program into sections, section 1 to section n (where n is an integer) in such a manner that when the content program is divided into the section 1 to the section n in a predetermined ratio, the length of ~~a section on the beginning side is smaller than the length of a section on the end side~~ section n is longer than the length of section 1;

formatting a signal in such a manner that the length of data of each of the section 1 to the section n in the content program is the same in each of channel 1 to channel n;
multiplexing the formatted signal; and
transmitting the multiplexed signal.

10. (Original) The transmitting method as set forth in claim 9, wherein the data of each of the section 1 to the section n has been written to the record medium corresponding to pre-designated addresses.

11. (Currently Amended) The transmitting method as set forth in claim 9, wherein the content program is divided by n so that a ratio of the lengths of the section 1 to the section n ~~become~~ is 1, 2, 4, . . . , $2^{(n-1)}$, respectively.

12. (Currently Amended) The transmitting method as set forth in claim 9, wherein the content program is divided so that a ratio of the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) ~~become~~ is 1, 2, 4, . . . , $2^{(m-1)}$, respectively, and ~~that~~ wherein the length of each of the section m to the section n is the same as the length of the section m.

13. (Original) The transmitting method as set forth in claim 9, wherein data of the section 1 to the section n-1 is repeated so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

14. (Original) The transmitting method as set forth in claim 9, wherein data of each of the section 1 to the section m-1 is repeated so that the length of each of signals of the channel 1 to the channel m-1 (where $1 < m < n$; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m.

15. (Original) The transmitting method as set forth in claim 9, wherein synchronous data, flag data, and the data of the section 1 to the section n are multiplexed,

the synchronous data being used to establish a synchronization, the flag data representing that beginning data is contained in each of the section 1 to the section n.

16. (Original) The transmitting method as set forth in claim 9, wherein the multiplexed signal is modulated.

17. (Currently Amended) A receiving apparatus for receiving a signal from a transmitting apparatus and reproducing the received signal, the transmitting apparatus having a first record medium on which at least one content program has been written, a section generating means for generating generator that divides the content program into sections, section 1 to section n (where n is an integer) in such a manner that when the content program is divided into the section 1 to the section n in a predetermined ratio, the length of ~~a section on the beginning side is smaller than the length of a section on the end side~~ section n is longer than the length of section 1, a signal formatting means for formatting formatter that formats a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, ~~multiplexing means for multiplexing~~ a multiplexer that multiplexes the formatted signal, and ~~transmitting means for transmitting~~ a transmitter that transmits the multiplexed signal, the receiving apparatus comprising:

~~separating means for separating~~ a separator to separate the received signal;

~~detecting means for detecting~~ a detector to detect a beginning data of each of the section 1 to the section n from the separated signals;

a second record medium on which the beginning data of each of the section 1 to the section n is written to channel 1 to channel n, respectively;

~~reading means for~~ a reader to successively reading read data of the section 2 to the section n from said second record medium after the beginning data of the section 1 is detected, the data of the section 1 is written to said second record medium starting from the beginning data of the section 1, the data of the section 1 is read from said second record medium, and the data of the section 1 + n is read from said second record medium; and

~~reproducing means for reproducing~~ a content program reproduction apparatus to reproduce the data of the section 1 to the section n that has been read from said second record medium.

18. (Currently Amended) The receiving apparatus as set forth in claim 17, wherein said ~~detecting means~~ detector detects bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal so as to detect whether or not beginning data of the section 1 to the section n are present.

19. (Currently Amended) The receiving apparatus as set forth in claim 17, wherein ~~when~~ the content program is divided so that a ratio of the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) ~~become~~ is $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m, said second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.

20. (Currently Amended) A receiving method for receiving a signal from a transmitting apparatus and reproducing the received signal, the transmitting apparatus having a first record medium on which at least one content program has been written, a section generating means for generating generator that divides the content program into sections, section 1 to section n (where n is an integer) in such a manner that when the content program is divided into the section 1 to the section n in a predetermined ratio, the length of ~~a section on the beginning side is smaller than the length of a section on the end side~~ section n is longer than the length of section 1, a signal formatting means for formatting formatter that formats a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, ~~multiplexing means for multiplexing~~ a multiplexer to multiplex the formatted signal, and ~~transmitting means for transmitting~~ a transmitter to transmit the multiplexed signal, the receiving method comprising ~~the steps of:~~

separating the received signal;

detecting beginning data of each of the section 1 to the section n from the separated signals;

writing the beginning data of each of the section 1 to the section n to channel 1 to channel n, respectively, to a second record medium;

successively reading data of the section 2 to the section n from the second record medium after the beginning data of the section 1 is detected, the data of the section 1 is written to the second record medium starting from the beginning data of the section 1, the data of the section 1 is read from the second record medium, and the data of the section 1 to n is read from the second record medium; and

reproducing the data of the section 1 to the section n that has been read from the second record medium.

21. (Original) The receiving method as set forth in claim 20, wherein bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal are detected so as to detect whether or not beginning data of the section 1 to the section n are present.

22. (Currently Amended) The receiving method as set forth in claim 20, wherein ~~when~~ the content program is divided so that a ratio of the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) ~~become~~ is $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m, the second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.

23. (Currently Amended) A transmitting and receiving system having a transmitting apparatus for transmitting a content program and at least one receiving apparatus for receiving the transmitted content and reproducing the received content program, wherein the transmitting apparatus comprises:

a first record medium on which at least one content program ~~has been written~~ is stored;

~~generating means for generating a section generator that divides the content program into sections, section 1 to section n (where n is an integer) in such a manner that when the content program is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side section n is longer than the length of section 1;~~

~~signal formatting means for formatting a signal formatter that formats a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n;~~

~~multiplexing means for multiplexing a multiplexer to multiplex the signal formatted by the signal formatter; and~~

~~transmitting means for transmitting a transmitter to transmit the multiplexed signal,~~

wherein the receiving apparatus comprises:

~~separating means for separating a separator to separate the received signal;~~

~~detecting means for detecting a detector to detect a beginning data of each of the section 1 to the section n from the separated signals;~~

a second record medium on which the beginning data of each of the section 1 to the section n is written to channel 1 to channel n, respectively;

~~reading means for a reader to successively reading read data of the section 2 to the section n from said second record medium after the beginning data of the section 1 is detected, the data of the section 1 is written to said second record medium starting from the beginning data of the section 1, the data of the section 1 is read from said second record medium, and the data of the section 1 to n is read from said second record medium; and~~

~~reproducing means for reproducing a content program reproduction apparatus to reproduce the data of the section 1 to the section n that has been read from said second record medium,~~

wherein the transmitting apparatus transmits the content program that has been divided by n to the receiving apparatus through a transmission line, and wherein when the receiving apparatus detects beginning data of the received content program, the receiving apparatus reproduces the content program.

24. (Original) The transmitting and receiving system as set forth in claim 23, wherein the data of each of the section 1 to the section n has been written to said first record medium corresponding to pre-designated addresses.

25. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein said section ~~generating means~~ generator divides the content program by n so that a ratio of the lengths of the section 1 to the section n ~~become~~ is 1, 2, 4, . . . , $2^{(n-1)}$, respectively.

26. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein said section ~~generating means~~ generator divides the content program so that a ratio of the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) ~~become~~ is 1, 2, 4, . . . , $2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m.

27. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein said signal ~~formatting means~~ formatter repeats data of the section 1 to the section n-1 so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

28. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein said signal ~~formatting means~~ formatter repeats data of each of the section 1 to the section m-1 so that the length of each of signals of the channel 1 to the channel m-1 (where $1 < m < n$; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m.

29. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein said ~~multiplexing means~~ multiplexer multiplexes synchronous data, flag data, and the data of the section 1 to the section n, the synchronous data being used

to establish a synchronization, the flag data representing that beginning data is contained in each of the section 1 to the section n.

30. (Original) The transmitting and receiving system as set forth in claim 23, wherein the multiplexed signal is modulated.

31. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein said ~~detecting means~~ detector detects bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal so as to detect whether or not beginning data of the section 1 to the section n are present.

32. (Currently Amended) The transmitting and receiving system as set forth in claim 23, wherein when the content program is divided so that a ratio of the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) become $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m, said second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.